



AMEBIASIS

1. **Agent:** *Entamoeba histolytica*, a protozoan parasite that exists as a trophozoite and cyst. A related non-pathogenic strain is distinct epidemiologically and biologically from the pathogenic species; this has been renamed *Entamoeba dispar*. *E. dispar* is not pathogenic in humans.

E. histolytica is not to be confused with non-pathogenic protozoa found commonly in humans, which require no treatment. These include *E. dispar*, *E. hartmanni*, *E. coli*, *E. polecki*, *Iodamoeba butschlii*, *Endolimax nana*, *Chilomastix mesnili*, *Trichomonas hominis*, *Retortamonas* species, *Enteromonas* species, and usually, *Blastocystis hominis*.

2. **Identification:**

- a. **Symptoms:** Depend on site.

Intestinal: There are four distinct intestinal clinical syndromes with *E. histolytica*. Asymptomatic colonization (cyst passage), acute amebic colitis, fulminant colitis, and ameboma. Asymptomatic cyst passage usually resolves without treatment; many such cases actually may have *E. dispar*. Patients with acute amebic colitis present with lower abdominal pain and have had frequent bloody stools over a period of several weeks; only about 1/3 have fever. Fulminant colitis is an uncommon presentation, most commonly seen in children. There is diffuse abdominal pain, profuse bloody diarrhea, and fever; concurrent liver abscess is common, and 3/4 may develop colonic perforations. Ameboma is a rare (1%) manifestation that may be without symptoms, or present as a tender mass accompanied by symptomatic dysentery.

Extra-intestinal: Amebic liver abscess, with either an acute clinical course with symptoms of <10 days, or a subacute course with symptoms lasting up to 6 months. Other sites of involvement include pleura, peritoneum, pericardium, and brain.

- b. **Differential Diagnosis:** Other bacterial, parasitic and viral causes of gastrointestinal illness. Amebic liver abscess should be differentiated from pyogenic abscess.
3. **Incubation period:** Variable, a few days to months; commonly 2-4 weeks.
4. **Reservoir:** Humans.
5. **Source:** Cysts from feces of infected case.
6. **Transmission:** Direct fecal-oral transmission, sexual transmission, ingestion of fecally contaminated food or water, colonic irrigation.
7. **Communicability:** Variable, as long a carrier state persists.
8. **Specific Treatment:** Consult the Medical Letter or Pediatric Red Book for specific drugs and dosages. Only *E. histolytica* requires treatment, but since most laboratories do not perform the test to distinguish it from *E. dispar*, treatment is commonly given to all persons with cysts or trophozoites of *E. histolytica* /*dispar* complex.
9. **Immunity:** None.

REPORTING PROCEDURES

1. **Reportable:** (Title 17, Section 2500, *California Code of Regulations*.) Report within 1 working day of identification of a case or suspected case.
2. **Report Form:**
PARASITE EPIDEMIOLOGIC CASE HISTORY FORM (acd-parasite)
3. **Epidemiologic Data:**
 - a. Indicate whether case is:
 - Acute (i.e., diarrhea within the past 6 weeks), chronically symptomatic, or asymptomatic carrier.
 - Intestinal or extra-intestinal (e.g., liver, lung abscess or other).



- b. Sexual orientation.
- c. History of colonic irrigation, when and where.
- d. Immigration from or travel to a developing country within 6 months prior to onset. Specific dates and places.
- e. Exposure to carrier and other persons with diarrheal illness within incubation period.
- f. Occupation of case and household members.
- g. Residence in facility for the developmentally disabled.
- h. Attendance in day care.

CONTROL OF CASE, CONTACTS & CARRIERS

Contact within 24 hours to determine if sensitive occupation or situation (SOS) involved. Otherwise, investigate within 3 days.

Public Health Nursing Home Visit Protocol:

Home visit as necessary – a face to face interview is conducted as necessary.

Refer to “Public Health Nursing Home Visit AS NECESSARY (HVAN) Algorithm” (B-73 Part IV Public Health Nursing Home Visit Protocol).

CASE:

Precautions: Enteric precautions until clinical recovery.

1. **Sensitive Occupation or Situation:** Applies only to food employees, not other SOS. Remove food employees from work until 3 consecutive feces specimens taken 3 or more days apart are negative by O&P. First specimen may be taken after patient is on medication for 5 days. Alternatively, if the *E. histolytica* EIA test is negative, the patient does not have amebiasis and is no longer a case. See Diagnostic Procedures below.

2. **Non-sensitive Occupation or Situation:** Release after clinical recovery unless household contacts are food employees.

CONTACTS:

Household members or persons who share a common source.

1. **Sensitive Occupation or Situation:**

- a. **Symptomatic:** Treat as a case.
- b. **Asymptomatic:** Clearance not recommended.

2. **Non-Sensitive Occupation or Situation:** Clearance not recommended.

CARRIERS:

Refer for treatment. Release as for case.

PREVENTION-EDUCATION

1. Stress hand washing and personal hygiene.
2. Advise about increased risk with anal and oral-anal sex.
3. Dispose of feces in a safe, sanitary fashion.
4. Take precautions with food and water when traveling to endemic areas.
5. Advise regarding risk associated with colonic irrigation.
6. Protect water supply from fecal contamination.

DIAGNOSTIC PROCEDURES

1. **Microscopic:**

Container: Feces-Parasite

Laboratory Form: Test Requisition Form H-3021 (Rev. 9/07)

Examination Requested: Ova & Parasites (O&P) for Amebiasis. Check appropriate boxes on laboratory form.

Material: Feces. Follow instructions provided with container.



Amount: Walnut size.

Storage: Do not refrigerate; protect from overheating.

Remarks: Mix thoroughly with PVA preservative. Do not collect specimen(s) for 7-10 days after barium, mineral oil, bismuth, antibiotics, anti-malarials or antidiarrheal preparations such as kaolin have been ingested. Specimen must be unpreserved and examined within 24 hours of passage.

Note: This test does not distinguish between *E. histolytica* and nonpathogenic *E. dispar*. A frozen, unpreserved stool sample can be submitted for *E. histolytica* EIA test to distinguish between the two. Please refer to LA County Public Health Laboratory test catalog for more information.

2. **Serology:** (used for extra-intestinal disease only) To California State Department of Health.

Container: Sterile tube.

Examination Requested: Amebiasis antibody.

Material: Serum.

Amount: 2 ml.

Storage: Refrigerate.

Remarks: Consult with Public Health Laboratory for more information about serology testing. Diagnostic titer: $\geq 1:128$ by IHA test. Allow 2 to 4 weeks for results.